WHAT IS CLAIMED IS:

1. An analytical model conversion method of converting a three-dimensional analytical model into a two-dimensional analytical model, comprising generating tetrahedral solid elements for an input three-dimensional geometric model, and connecting intermediate nodes of sides that extend in a direction of plate thickness in each tetrahedral solid element to generate a triangular or rectangular shell element.

2. The method according to claim 1, wherein the three-dimensional shape is a shape having a thin-walled structure, and tetrahedral elements having a single-layered structure are generated in the direction of plate thickness.

3. The method according to claim 1, wherein a plate thickness of the three-dimensional shape is calculated, and plate thickness information is added to the triangular or rectangular shell element as a neutral plane element.

4. The method according to claim 1, wherein for the triangular shell element, two adjacent triangular shell elements are converted into a rectangular shell element as needed.